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ABSTRACT

Using the Guttman scale of quality and availability of community services, two mail surveys probing 46 community services via a 1/1000 proportional sample based on the total population in each of North Carolina's 100 counties and a county sample (an average of 88 responses out of 150 questionnaires per county) were ranked by county and social (income, age, education) and demographic (rural-urban) differences. The 46 items of availability and quality were derived from the following general categories: health, culture, education, jobs, housing, social services, law enforcement, recreation, transportation, economic development, environmental protection, and community involvement. The following issues were rated most critical: availability of public transportation, alcohol and drug rehabilitation, state parks, assistance to disabled and aged, low income housing, and family doctors; quality of job opportunities; control of crime and juvenile delinquency; contribution of tourism to local economy; and effectiveness of land-use planning. In general, those people of lower income and less educational attainment and those in more rural areas perceived most community items as poorer in quality and availability than did those of higher income and/or education. (JC)

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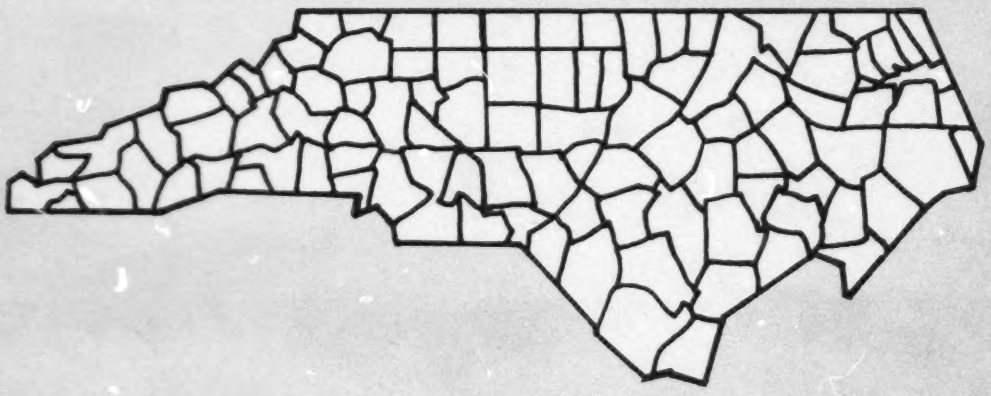
# NORTH CAROLINA
## TODAY AND TOMORROW



**Vol. 8 Peoples' Views on Community Services**

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# HIGHLIGHTS

All 100 counties in North Carolina are rated by the residents of each county on the availability and quality of 46 community services and opportunities. Scales are provided which show the relationship between availability and/or quality of key community services with the size of county population. The scales and accompanying social and demographic comparisons suggest areas where efforts are needed to improve the quality of life across North Carolina.

by

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## INTRODUCTION

The quality and availability of community services throughout North Carolina could be measured in many ways. One could calculate capital outlays, location of services, number of people served, distance to services, or economic feasibility of various services. Such information taken separately or in some combination could reveal valuable information on community services. But, in all of these approaches, the people would not be asked directly their appraisal of quality or availability. In this publication a subjective evaluation approach was adopted.[1] People throughout North Carolina were asked to personally evaluate the quality and availability of services in their local community. Based on peoples' perception of the quality and availability of services in each of the 100 North Carolina counties, the counties were ordered in "quality of services" and "availability of services" scales. County and socioeconomic variations were also explored.

The purpose of the publication is to stimulate thoughtful discussion concerning the public view of life across North Carolina. Since the data were gathered at only one point in time and the sample in each county only numbers about 88, the information should be viewed with proper reservation. Hopefully, the county scales and the accompanying discussion will stimulate more elaborate studies in the future which will not only indicate the peoples' perception of services but also provide objective information concerning the actual existence of services, the use of services, and the economic feasibility of various community services.

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[1]This publication is number eight of nine Volumes of data on North Carolina Today and Tomorrow. Volume 1 contains information on the Western counties; Multi-County Planning Regions A and B. Volume 2 focuses on Regions D and G; Volume 3 on Regions C, E, F; Volume 4 on Regions J, K, L; Volume 5 on Regions H, M, N; Volume 6 on Regions Q and R; Volume 7 on Regions O and P. Volume 9 studies Land Use issues from a state-wide perspective. These publications are available through the County Agricultural Extension Service. Copies may also be obtained by writing directly to the Agricultural Information Service, North Carolina State University, Ricks Hall, Raleigh, North Carolina 27607.

## SAMPLE

These data were gathered during the Spring of 1975 by means of mail questionnaires. Approximately 150 names were drawn from telephone directories for each of the 100 North Carolina counties. On the average, 88 respondents in each county returned usable questionnaires. Heads of households were requested to complete the questionnaire. Combined with this county sample was a 1/1000 statewide proportional sample based on the total population in each county. A detailed presentation of the number sampled and response rates for both the total county sample and the statewide proportional sample are provided on the last two pages of this publication. Both samples (each clearly indicated) will be used in the following discussion.

## GROWTH, DEVELOPMENT, AND COMMUNITY SERVICES

Picture a small town around 1920. The town probably contained a small general store, a restaurant, perhaps a hotel and a few other services. As highways and roads improve, communication systems (telephone, telegraph, newspapers) develop, combined with a gradual increase in population, one would likely see the number and diversity of community services increase. For example, a small industry may locate, speciality stores open, a hospital and schools be established and other diversified activities develop. Such a process of growth and development in which services continually expand and differentiate has been called urbanization, modernization, and industrialization. These concepts assume the stepwise building of more complex community structures upon simpler structures, the former encompassing the latter. The concepts of development also assume a unidimensional development of services to the extent that certain simple services exist before more complex services can develop. Before a hospital can be established, doctors must be available; before industry can locate, there must be adequate water, electrical, and sewage facilities.

Developing this idea of the differentiation of community services as populations grow in size, a sample of people in each of the 100 North Carolina counties were asked to assess the availability and quality of services. It was assumed that more heavily populated counties would have greater differentiation of services, that is, have more services available to the people in those counties. It was also assumed that better quality services would be available in more heavily populated counties. The data provided in this publication permitted investigation of these assumptions concerning the extent to which availability and/or quality of services were dependent upon population concentration.

## QUALITY OF COMMUNITY SERVICE SCALES

One section of the mail questionnaire asked respondents to rate the quality of 11 community services as poor, fair, good, or excellent. The 11 items included: quality of libraries, quality of elementary and secondary education, quality of county and city law enforcement, quality of state parks, quality of job opportunities, quality of cultural opportunities (crafts, music, drama), overall quality of medical services and facilities, quality of public parks and playgrounds, quality of child-welfare service, quality of highway patrol, and overall quality of recreational facilities. These items are listed in a shortened form across the top of Table 1. A listing of the 46 items included in the community section of the questionnaire are provided and discussed in Tables 4 through 8 of this publication.

The 100 North Carolina counties are listed in the left hand column of Table 1. The number that appears beside the county is the population density rank. For example, Mecklenburg County is the most densely populated county in North Carolina and received a rank of 1; Hyde County is the least populated county (people per square mile) and received a rank of 100.

Table 1: Guttman scale of quality of community services for 100 North Carolina Counties.

| Rank* Population Density | COUNTIES | QUALITY OF COMMUNITY SERVICES** LIBRARIES | EDUCATION | LAW ENFORCEMENT | MEDICAL | STATE PARKS | CULTURE | PUBLIC PARKS | RECREATION | CHILD CARE | ERRORS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Step 1 | FORSYTH | X | X | X | X | X | X | X | X | X | 0 |
| 10 2 | GUILFORD | X | X | X | X | X | X | X | X | X | 0 |
| 26 | BURKE | X | X | X | X | X | 0 | X | X | X | 2 |
| 8 | WAKE | X | X | X | X | X | 0 | X | X | X | 2 |
| 46 | MATAUGA | X | X | X | X | X | X | X | X | | 2 |
| 10 | VANCE | X | X | X | X | X | X | X | X | | 2 |
| 28 | HENDERSON | X | X | X | X | X | 0 | X | X | | 3 |
| 17 | WILSON | X | X | X | X | X | X | X | X | | 1 |
| Step 63 | TRANSYLVANIA | X | X | X | X | X | 0 | X | X | | 1 |
| 9 65 | MACON | 0 | X | X | 0 | 0 | 0 | X | X | | 3 |
| Step 16 | WAYNE | 0 | X | X | X | X | 0 | X | X | | 3 |
| 8 72 | STANLY | X | X | X | 0 | X | 0 | X | | | 2 |
| 18 | ORANGE | X | X | X | X | X | 0 | X | | | 2 |
| Step 1 | MECKLENBURG | X | 0 | X | X | X | X | | | X | 1 |
| 7 3 | DURHAM | 0 | 0 | X | X | X | X | | | X | 2 |
| 66 | POLK | X | X | 0 | X | 0 | X | | | | 3 |
| Step 15 | CLEVELAND | X | X | X | X | X | | | | | 1 |
| 6 11 | BUNCOMBE | X | X | 0 | X | X | | | | | 1 |
| 14 | ROWAN | X | X | 0 | X | X | | | | | 1 |
| 4 | NEW HANOVER | X | X | X | 0 | X | | | | | 1 |
| 9 | CATAWBA | X | X | X | X | | | | | | 0 |
| 25 | LEE | X | X | X | X | | | | | | 0 |
| 33 | EDGECOMBE | X | X | X | X | | | | | | 0 |
| 6 | GASTON | X | X | X | X | | | X | | X | 2 |
| 12 | CABARRUS | 0 | X | X | X | | | | | | 1 |
| Step 31 | NASH | X | X | 0 | X | | | | | | 1 |
| 5 59 | FRANKLIN | X | 0 | X | X | | | | | | 1 |
| 60 | MOORE | X | 0 | X | X | | | | | | 1 |
| 32 | CALDWELL | X | 0 | X | | | | | | | 1 |
| 29 | PITT | X | X | X | | | | | | | 0 |
| 38 | UNION | X | X | X | | | X | | | X | 2 |
| 41 | SCOTLAND | X | X | X | | | | | | | 0 |
| 19 | LENOIR | X | 0 | X | | | | | | | 0 |
| 23 | IREDELL | 0 | X | X | | | | X | X | | 3 |
| 27 | PASQUOTANK | X | 0 | X | | | | | | | 1 |
| 37 | ROBESON | X | 0 | X | | | | | | | 1 |
| Step 55 | CHOWAN | X | 0 | X | | | | | | | 1 |
| 4 69 | ASHE | 0 | X | X | | | | | | | 1 |
| 70 | NORTHAMPTON | X | 0 | X | | | | | | | 1 |
| 13 | DAVIDSON | X | X | | | | | | | | 0 |
| 22 | ROCKINGHAM | X | X | | | | | | | | 0 |
| 34 | RANDOLPH | X | X | | | | | | | | 0 |
| 35 | SURRY | X | X | | | X | | | | | 0 |
| 39 | RICHMOND | X | X | | | | | | | | 0 |
| 40 | RUTHERFORD | X | X | | | X | | | | | 0 |
| 43 | JOHNSTON | X | X | | | | | | | | 0 |
| 44 | HAYWOOD | X | X | | | X | | | | | 0 |
| 49 | DAVIE | X | X | | | | | | | | 0 |
| 50 | MCDOWELL | X | X | | | | | | | | 0 |
| 53 | PERSON | X | X | | | | | | | | 0 |
| 72 | JACKSON | X | X | | | | | | | | 0 |
| 73 | BEAUFORT | X | X | | | | | | | | 0 |
| 82 | CHEROKEE | X | X | | | | | | | | 0 |
| 83 | ALLEGHANY | X | X | | | | | | | | 0 |
| 98 | SWAIN | X | X | | | | | | | | 0 |
| 30 | LINCOLN | 0 | X | | | X | | | | | 1 |
| 52 | WILKES | 0 | X | | | | | | | | 1 |
| Step 58 | GREENE | 0 | X | | | | | | | | 1 |
| 3 75 | HOKE | 0 | X | | | | | | | | 1 |
| 94 | GRAHAM | 0 | X | | | | | | | | 1 |
| 7 | CUMBERLAND | X | | | | | | | | | 0 |
| 36 | CRAVEN | X | | | | | | | | | 0 |
| 42 | HARNETT | X | | | | | | | | | 0 |
| 45 | ALEXANDER | X | | | | | | | | | 0 |
| 47 | YADKIN | X | | | | | | | | | 0 |
| 51 | HERTFORD | X | | | | | | | | | 0 |
| 54 | MITCHELL | X | | | | | | | | | 0 |
| 56 | GRANVILLE | X | | | | | | | | | 0 |
| 57 | CARTERET | X | | | | | | | | | 0 |
| 64 | AVERY | X | | | | | | | | | 0 |
| 71 | CASWELL | X | | | | | | | | | 0 |
| 74 | ANSON | X | | | | | | | | | 0 |
| 76 | CHATHAM | X | | | | | | | | | 0 |
| 77 | WASHINGTON | X | | | | | | | | | 0 |
| 79 | MONTGOMERY | X | | | | | | | | | 0 |
| 88 | CURRITUCK | X | | | | | | | | | 0 |
| 91 | CLAY | X | | | | | | | | | 0 |
| Step 96 | PENDER | X | | | | | | | | | 0 |
| 2 97 | DARE | X | | | | | | | | | 0 |
| 99 | TYRRELL | X | | | | | | | | | 0 |
| 20 | ONSLOW | | | X | | | | | | | 1 |
| 21 | VANCE | | | X | | | | | | | 1 |
| 48 | HALIFAX | | | | | | | | | | 0 |
| 61 | MARTIN | | | | | | | | | | 0 |
| 62 | STOKES | | | | | | | | | | 0 |
| 65 | COLUMBUS | | | | | X | | | | | 1 |
| 67 | SAMPSON | | | | | | | | | | 0 |
| 68 | DUPLIN | | | | | | | | | | 0 |
| 78 | VANCEY | | | | | X | | | | | 1 |
| 80 | WARREN | | | | | | | | | | 0 |
| 81 | MADISON | | | | | | | | | | 0 |
| 84 | PERQUIMANS | | | | | | | | | | 0 |
| 86 | BERTIE | | | | | | | | | | 0 |
| 87 | BLADEN | | | | | | | | | | 0 |
| 89 | PAMLICO | | | | | | | | | | 0 |
| 90 | BRUNSWICK | | | | | | | | | | 0 |
| 92 | GATES | | | | | | | | | | 0 |
| Step 93 | CAMDEN | | | | | | | | | | 0 |
| 1 95 | JONES | | | | | | | | | | 0 |
| 100 | HYDE | | | | | | | | | | 0 |

Coefficient of Reproducibility = .94
Coefficient of Scalability = .78

*Counties ranked from most densely populated (1) to least densely populated (100).
**X = 50 percent or more respondents said the quality of community services were good or excellent.
0 or blank = Less than 50 percent of respondents said the quality of community services were good or excellent.

In order to assess whether the majority of people in more heavily populated counties perceived the quality of their services as good or excellent in comparison with people in less populated counties, the following procedure was adopted. If 50 percent or more of the respondents within a county indicated the quality of a particular service or opportunity was good or excellent, the county was accredited (given an X) with possession of quality services on that step of the guttman scale. If less than 50 percent said good or excellent, the item was given a 0 or blank for that county. For one of the eleven items (Quality of the highway patrol), over 50 percent of the respondents from all 100 counties indicated quality service. On another item (Quality of job opportunities), in no county did 50 percent of respondents indicate quality opportunities. Thus, these two items were excluded because they did not meet the criteria for inclusion of items.[2] The other nine items are reported in Table 1. The coefficient of reproducibility and the coefficient of scalability were above the conventional criteria of .90 and .65 respectively. In terms of internal validity, the scale was quite encouraging. However, since this scale provided only a limited number and kinds of services and has not been tested at different points in time, the results can only be presented as descriptive of the potential for such scales in assessing quality of life from the peoples' perspective.

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[2]Discussion of guttman scaling and the criteria for developing scales can be found in: Allen Edwards, Techniques of Attitude Scale Construction. New York: Appleton-Century-Crofts, Inc., 1957; Sergio Sismondo, "A concept not a proxy: the meaning and measurement of differentiation," New Brunswick Newstart, Inc. Canada (R-73-133); Frank and Ruth Young, "The sequence and direction of community growth: a cross cultural generalization," Rural Sociology 27(4): 374-386

The meaning of the Table can be more easily understood if one starts at the bottom of the page in Table 1 at Step 1. In step one, 20 counties were listed in which the majority of the respondents from these counties did not indicate that these 9 items (libraries, education, law enforcement, etc.) were good or excellent. Thus, no "X's" appeared. In Step 2, 20 counties were listed in which 50 or more percent of the county respondents indicated that the quality of libraries were good or excellent. However, they did not rate the other nine items in this manner. In Step 3, 21 counties were listed in which the majority of the respondents said that both the quality of libraries and the quality of primary and secondary education was good or excellent. In Step 4, 17 counties were listed in which respondents in these counties rated the quality of libraries, education, and law enforcement as good or excellent. In Step 5, 9 counties were listed in which the majority of respondents rated libraries, education, law enforcement, and medical facilities as good or excellent. One could keep going up the scale in the same manner. It appears from the unidimensional order of the response that before people saw the quality of schools as good or excellent, they saw libraries as good or excellent. In like manner, before the majority of respondents perceived the quality of law enforcement as good or excellent, they perceived the quality of both libraries and education as good or excellent. This illustrated how the quality of services build one upon the other.

In order to see how the peoples' perception of the quality of various services relate to population density, one can compare the ranking of counties with the perception of quality. Inspection of Table 1 reveals that 71 of the 100 counties appear in Step one, two or three. Of these 71 counties, only 5 of the 25 most densely populated counties appear, while 24 of the 25 least populated counties appear. While several exceptions exist (e.g., a very

sparsely populated county appeared in Step 9 and a very densely populated county appeared in Step 2), more densely populated counties seem to have consistently higher quality services from the perspective of people living in those counties.

## AVAILABILITY OF COMMUNITY SERVICES

In selecting the "quality" items to be used in the questionnaire the rational was to select items presumed to be available in communities. For example, educational facilities and libraries were available in all counties and an investigation of the quality of these services seemed of greater importance. However, for some items, this assumption could not be made. Thus, a second scale was developed on the availability of various services.

Ten items were selected to assess the unidimensionality of the availability of community services (Table 2). Some of the items were comparable to items included in the "quality" scale (e.g., libraries, medical facilities, public parks, culture). However, for other items like availability of food stamps, dentists, and apartments, the quality of these items seemed of less importance than their presence in a community. In Table 2, across the top of the page 10 items are listed. The exact wording for the ten items were: availability of libraries, availability of food stamp program, contribution of industry to local economy, availability of dentists, availability of medical facilities, availability of rental apartments, availability of cultural opportunities (crafts, music, drama), availability of family doctors, availability of public parks and playgrounds, availability of child-care centers. Again, down the left hand side of the page were the 100 North Carolina counties and their population density rank.

Table 2: Guttman scale of availability of community services for 100 North Carolina Counties.

| Rank* Population Density | COUNTIES | AVAILABILITY OF COMMUNITY SERVICES** LIBRARIES | FOOD STAMPS | INDUSTRY | DENTISTS | MEDICAL FACILITIES | APARTMENTS | CULTURE | FAMILY DOCTORS | PUBLIC PARKS | CHILD CARE | ERRORS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | FORSYTH | X | X | X | X | X | X | X | X | X | X | 0 |
| 5 | GUILFORD | X | X | X | X | X | X | X | X | X | X | 0 |
| Step 11 8 | WAKE | X | X | X | X | X | X | X | 0 | X | X | 1 |
| 10 | ORANGE | X | X | 0 | X | X | X | X | 0 | X | X | 1 |
| Step 10 17 | WILSON | X | X | X | X | X | X | X | X | 0 | X | 2 |
| 3 | DURHAM | 0 | X | X | X | X | 0 | 0 | X | X | | 2 |
| Step 9 28 | HENDERSON | X | X | X | X | X | X | X | X | | | 1 |
| 1 | MECKLENBURG | X | X | X | X | X | 0 | X | X | | | 1 |
| Step 8 46 | WATAUGA | X | X | 0 | X | X | X | X | | | | 0 |
| 4 | NEW HANOVER | X | X | X | X | X | 0 | X | | | X | 3 |
| 10 | ALAMANCE | X | X | X | X | X | X | | | | | 1 |
| 6 | GASTON | X | 0 | X | X | X | X | | | X | | 1 |
| 9 | CATAWBA | X | 0 | X | X | X | X | | | | | 1 |
| Step 7 7 | CUMBERLAND | X | X | X | X | 0 | X | | | | | 2 |
| 15 | CLEVELAND | X | X | X | X | X | | | | | | 1 |
| 25 | LEE | X | X | X | X | X | | | | | | 1 |
| 26 | BURKE | X | X | X | X | X | | | X | | | 1 |
| 31 | NASH | X | X | X | X | X | | | X | | | 1 |
| 64 | TRANSYLVANIA | X | X | X | X | X | | | | | | 0 |
| 11 | BUNCOMBE | X | 0 | X | X | X | | | | X | | 1 |
| 12 | CABARRUS | X | X | X | X | X | | | X | | | 1 |
| 33 | EDGECOMBE | X | X | X | X | X | | | | | | 1 |
| Step 6 16 | WAYNE | 0 | X | X | X | X | | | | X | | 3 |
| 29 | PITT | X | X | X | X | X | | | | | | 1 |
| 55 | CHOWAN | X | X | 0 | X | | | X | | | | 1 |
| 22 | ROCKINGHAM | X | 0 | X | X | | | | | | | 1 |
| Step 5 30 | LINCOLN | 0 | X | 0 | X | | | | | | | 2 |
| 44 | HAYWOOD | X | 0 | X | X | | | | | | | 1 |
| 13 | DAVIDSON | X | X | X | | | | | | | | 0 |
| 14 | ROWAN | X | X | X | | | | | | | | 0 |
| 24 | CALDWELL | X | X | X | | | | | | | | 0 |
| 73 | BEAUFORT | X | X | X | | | | | | | | 0 |
| 66 | POLK | X | X | X | | | | | | | | 0 |
| 7 | ROBESON | X | X | X | | | | X | X | | | 2 |
| 51 | HERTFORD | X | X | X | | | | | | | | 0 |
| 39 | RICHMOND | X | X | X | | | | | | | | 0 |
| 40 | RUTHERFORD | X | X | X | | | | | | | | 0 |
| 41 | SCOTLAND | X | X | X | | | | | | | | 0 |
| 23 | IREDELL | X | 0 | X | | | | | | | | 1 |
| 34 | RANDOLPH | X | X | X | | | | | | | | 0 |
| 50 | MCDOWELL | X | 0 | X | | | | | | | | 1 |
| 19 | LENOIR | 0 | X | X | | | | | | | | 1 |
| 21 | VANCE | 0 | X | X | | | | | | | | 1 |
| Step 4 61 | MARTIN | 0 | X | X | | | | | | | | 1 |
| 75 | HOKE | 0 | X | X | | | | | | | | 1 |
| 43 | JOHNSTON | X | X | | | | | | | | | 0 |
| 60 | MOORE | X | X | | | X | | | | | | 1 |
| 38 | UNION | X | X | | | | | | | | | 0 |
| 56 | GRANVILLE | X | X | | | | | | | | | 0 |
| 35 | SURRY | X | X | | | | | | | | | 0 |
| 42 | JACKSON | X | X | | | | | | | | | 0 |
| 47 | STANLY | X | X | | | | | | | | | 0 |
| 74 | WASHINGTON | X | X | | | | | | | X | | 1 |
| 83 | ALLEGHANY | X | X | | | | | | | | | 0 |
| 96 | PENDER | X | X | | | | | | | | | 0 |
| 98 | SWAIN | X | X | | | | | | | | | 0 |
| 48 | HALIFAX | 0 | X | | | | | | | | | 1 |
| 58 | GREENE | 0 | X | | | | | | | | | 1 |
| 65 | COLUMBUS | 0 | X | | | | | | | | | 1 |
| 68 | DUPLIN | 0 | X | | | | | | | | | 1 |
| 69 | ASHE | 0 | X | | | | | | | | | 1 |
| 70 | NORTHAMPTON | 0 | X | | | | | | | | | 1 |
| 80 | WARREN | 0 | X | | | | | | | | | 1 |
| 84 | PERQUIMANS | 0 | X | | | | | | | | | 1 |
| 85 | MACON | 0 | X | | | | | | | | | 1 |
| 86 | BERTIE | 0 | X | | | | | | | X | | 2 |
| 87 | BLADEN | 0 | X | | | | | | | | | 1 |
| 94 | GRAHAM | 0 | X | | | | | | | | | 1 |
| Step 3 99 | TYRRELL | 0 | X | | | | | | | | | 1 |
| 100 | HYDE | 0 | X | | | | | | | | | 1 |
| 27 | PASQUOTANK | X | | | | | | | | | | 0 |
| 72 | HARNETT | X | | | | | | | | | | 0 |
| 45 | ALEXANDER | X | | | | | | | | | X | 1 |
| 47 | YADKIN | X | | | | | | | | | | 0 |
| 49 | DAVIE | X | | | | | | | | | | 0 |
| 53 | PERSON | X | | | | | | | | | | 0 |
| 57 | CARTERET | X | | | | | | | | | | 0 |
| 59 | FRANKLIN | X | | | | | | | | | | 0 |
| 63 | AVERY | X | | | | | | | | | | 0 |
| 71 | CASWELL | X | | | | | | | | | | 0 |
| 76 | ANSON | X | | | | | | | | | | 0 |
| 78 | CHATHAM | 0 | | | X | | | | | | | 1 |
| 79 | MONTGOMERY | 0 | | | | | | | | | | 0 |
| 82 | CHEROKEE | 0 | | | | | | | | | | 0 |
| Step 2 97 | CLAY | 0 | | | | | | | | | | 0 |
| 91 | DARE | X | | | | | | | | | | 0 |
| 20 | ONSLOW | | | | | | | | | | | 0 |
| 67 | SAMPSON | | | | X | X | X | | | | | 2 |
| 36 | CRAVEN | | | | | | | | | | | 0 |
| 32 | WILKES | | | | | | | | | | | 0 |
| 54 | MITCHELL | | | | | | | | | | | 0 |
| 62 | STOKES | | | | | | | | | | | 0 |
| 78 | YANCEY | | | | | | | | | | | 0 |
| 81 | MADISON | | | | | | | | | | | 0 |
| 88 | CURRITUCK | | | | | | | | | | | 0 |
| 89 | PAMLICO | | | | | | | | | | | 0 |
| 90 | BRUNSWICK | | | | | | | | | | | 0 |
| 92 | GATES | | | | | | | | | | | 0 |
| 93 | CAMDEN | | | | | | | | | | | 0 |
| Step 1 95 | JONES | | | | | | | | | | | 0 |

Coefficient of Reproducibility = .94
Coefficient of Scalability = .71

*Counties ranked from most densely populated (1) to least densely populated (100).
**X = 50 percent or more respondents said the availability of community services were good or excellent.
0 or blank = Less than 50 percent of respondents said the availability of community services were good or excellent.

The procedure for interpreting Table 2 was the same as for Table 1. If 50 percent or more respondents in a particular county indicated that the availability of a service or opportunity was good or excellent the item was given an "X". If less than 50 percent were perceived the availability as good or excellent, the item was given an "O" or blank.

In Step 1 at the bottom right hand corner of Table 2, 14 counties were listed in which less than the majority of respondents indicated availability of any service or opportunity as good or excellent. Step 2 included 16 counties in which the majority of respondents perceived the availability of libraries as good or excellent but did not perceive any other services or opportunities as good or excellent. In Step 3, respondents in 25 counties perceived as good or excellent the availability of both libraries and food stamp programs. It was interesting to note that objectively, libraries and food stamp programs existed in all 100 counties. Obviously, in many counties the public did not perceive this availability. One could keep going up the steps and observe how perception of the availability of services expanded and differentiated.

Comparing availability of services to the population concentration in the 100 counties, more heavily populated counties have more services available from the general public's perspective. In Table 2, only 1 of the 25 more densely populated counties appeared in steps one to three while 25 of 25 least populated counties appeared. Thus, availability of services seemed more closely related to population density than quality of services.

A statistical interpretation of these relationships is provided on the next page. This page may be skipped by those wishing to get to the next section on how to use these scales and what they mean in relation to other socioeconomic and demographic comparisons.

## COUNTY POPULATION, QUALITY AND AVAILABILITY: A Statistical Interpretation

In order to provide a statistical interpretation of the relationships between county population, availability of community services, and quality of community services, scale scores were calculated for each county. Pearson correlation coefficients were then derived for the relationship between actual county population density (persons/square mile), quality of community service scores and availability of service scores (table 3). Kendall Taus' (in parentheses) were calculated between county population density rank, quality of community service scores and availability of community service scores.

Table 3: Correlation Matrix

| | a | b | c |
|---|---|---|---|
| a. Density | | (.51) | (.55) |
| b. Quality | .53 | | (.65) |
| c. Availability | .72 | .86 | |

The strength of the relationships between density and the availability of services and between density and quality of services were fairly strong. The earlier noted claim for the dependence of availability of services upon the degree of population concentration was supported by the strong correlation coefficient (r=.72). This accounted for 52 percent of the explained variance. The claim for the dependence of quality of community services upon population concentration was also supported although the correlation coefficient (r=.53) was not as strong as that between availability and density.

The relationship between availability and quality of services has to be interpreted with caution. Although several of the community service items in Table 1 and 2 were comparable and appeared in the same sequence, all were not identical. Thus, the very strong correlation coefficient (r=.86) between availability scores and quality scores only implies a strong relationship between scores and not between the availability and quality of a specific service.

## USE OF SCALES

These types of scales suggest several practical implications. Often the community or state worker wishes to improve the quality or availability of services in certain counties. Such scales as outlined here could provide practical examples of where to start (i.e., where the "X's" run out or where "O's" appear). This point is quite important and requires some elaboration. First, what do the "O's" mean? If these were perfect scales, all "O's" should be "X's". This means that "O's" on particular community items are areas most susceptible to improvement and development. This can indicate areas where educational programs of awareness would most likely be successful. It can also raise questions of why people do not perceive the service or opportunity as good or excellent.

Second, the services on the scale occurring where the "X's" run out across the page indicate areas which are next ready for improvement and development. For example, in Mecklenburg County (Table 1, 14th county down) an "O" appears in the quality of education items. This raises questions concerning the cause of this lower evaluation and indicates an area where improvement should be relatively easy to achieve. In the same county, the "X's" run out with the culture item. This indicates that public parks as an item should be the next logical area to improve. Again, in Mecklenburg County, one sees several blanks then an "X" under child care. This can indicate that the two community services in between (public parks and recreation) should improve in the public's perception over the next few years or that the majority of the public in this county will no longer see child care as good or excellent. Remember, this approach is based on the assumption of the stepwise building of services and the situational constraints which may exist within a county may foil the logical continuity of such a scaling approach.

Another way to use these scales is to compare the actual existence of various services to the peoples' perception of the quality and/or availability of such services. The scales describe what is perceived as being available and not what in fact is available. For example, libraries, educational facilities, law enforcement, public parks, food stamp programs and other services are available in all 100 North Carolina counties. Obviously, in many counties the majority of people do not perceive their availability as good or excellent. The previously noted relationship between availability scores and quality scores suggests that, if the people do not perceive availability of services, they will not perceive quality of services. Thus, with appropriate objective information, such perceptual data could indicate a particular county's success in getting services to the general public. It could be used as both an evaluative measure and a developmental barometer.

## SOCIAL AND DEMOGRAPHIC INFLUENCES

Thus far the discussion has focused on the 100 North Carolina counties and how people in these counties perceive the quality of nine community services and the availability of eleven community services. In the study 46 community items were included. Table 4 shows responses on all the community items. In the last two columns county examples are provided to show the considerable variation in how respondents from different counties perceived the quality and availability of different community services and issues. For example, only 19 percent of the respondents in Orange County perceive the availability of public transportation as poor (first item Table 4). In Avery County, 89 percent perceived the availability of public transportation as poor. By looking at the county examples one can see that on most issues counties vary by more than 50 percent. On some issues it gets up to 80 percent differences.

You will recall that four responses were available to respondents: poor, fair, good, excellent. Table 4 presents the percentage response for each community item for these responses. In the following tables, information will be provided on the percent of people who perceive different services and issues as poor. This approach allows one to see the community services from a problem perspective. This helps to highlight critical areas of community concern. The category poor is an extreme response and people who use this category usually feel strongly that something is wrong. From a statewide perspective the following 10 issues were rated as the more critical problem areas:

1. Availability of public transportation
2. Quality of job opportunities
3. Availability of alcohol and drug rehabilitation service
4. Contribution of tourism to local economy
5. Availability of state parks
6. Effectiveness of land-use planning
7. Availability of assistance to aged and disabled
8. Availability of low income housing
9. Control of crime and juvenile delinquency
10. Availability of family doctors

With this as a background, we can now proceed to look at social (income, education, and age) and demographic (rural-urban) differences. The data for the following tables are based upon the statewide proportional sample. For example, of the 3054 respondents, 200 are from Mecklenburg County and 6 are from Hyde County (see last two pages of this publication for greater detail).

Table 4: North Carolinians' evaluations of community services.

| AVAILABILITY OF COMMUNITY SERVICES | GOOD OR EXCELLENT | FAIR | POOR | Examples of County Variations* % Said POOR LOW COUNTY | HIGH COUNTY |
|---|---|---|---|---|---|
| Availability of public transportation | 15% | 31% | 54% | Orange 19% | Avery 89% |
| Availability of alcohol and drug rehabilitation service | 29 | 37 | 34 | Durham 5% | Swain 76% |
| Availability of state parks | 30 | 34 | 36 | Stanly 5% | Gates 85% |
| Availability of assistance for aged and disabled | 26 | 48 | 26 | Durham 9% | Dare 51% |
| Availability of low income housing | 29 | 38 | 33 | Richmond 15% | Tyrrell 83% |
| Availability of family doctors | 34 | 33 | 33 | Henderson 7% | Gates 90% |
| Availability of mental health services | 35 | 38 | 27 | Durham 6% | Hyde 80% |
| Availability of public parks & playgrounds | 33 | 34 | 33 | Macon 10% | Gates 87% |
| Availability of job training | 33 | 40 | 27 | Durham 10% | Hyde 75% |
| Availability of cultural opportunities | 36 | 37 | 27 | Henderson 4% | Brunswick 71% |
| Availability of special education programs | 34 | 43 | 23 | Pitt 10% | Dare 60% |
| Availability of child care centers | 36 | 42 | 23 | Durham 6% | Gates 85% |
| Availability of public kindergarten programs | 36 | 43 | 21 | Alleghany 3% | Avery 43% |
| Availability of middle income housing | 37 | 44 | 19 | Forsyth 2% | Swain 56% |
| Availability of rental apartments | 42 | 32 | 26 | Forsyth 4% | Clay 87% |
| Availability of dentists | 49 | 32 | 19 | Haywood 6% | Tyrrell 93% |
| Availability of medical facilities | 47 | 32 | 21 | Henderson 1% | Gates 81% |
| Availability of food stamp program | 53 | 36 | 11 | Lee 2% | Brunswick 21% |
| Availability of libraries | 61 | 29 | 10 | Randolph 1% | Onslow 39% |
| **QUALITY OF COMMUNITY SERVICES** | | | | | |
| Quality of job opportunities | 24 | 40 | 36 | Durham 14% | Gates 80% |
| Quality of public parks and playgrounds | 35 | 36 | 29 | Macon 10% | Gates 80% |
| Overall quality of recreational facilities | 35 | 39 | 26 | Macon 7% | Gates 77% |
| Quality of cultural opportunities | 35 | 40 | 25 | Henderson 4% | Hyde 65% |
| Condition of streets and roads | 40 | 44 | 16 | Gates 4% | Brunswick 47% |
| Quality of state parks | 43 | 35 | 22 | Stanly 4% | Gates 73% |
| Quality of child-welfare services | 37 | 50 | 13 | Columbus 4% | Brunswick 44% |
| Overall quality of medical services & facilities | 46 | 36 | 18 | Henderson 3% | Hyde 76% |
| Quality of county and city law enforcement | 49 | 36 | 15 | Forsyth 4% | Gates 48% |
| Quality of elementary and secondary education | 53 | 35 | 12 | Union 2% | Washington 28% |
| Condition of highways | 57 | 34 | 9 | Pitt 1% | Brunswick 45% |
| Quality of libraries | 62 | 29 | 9 | Wilkes 1% | Hyde 45% |
| Quality of highway patrol | 72 | 24 | 4 | Hertford 0% | Jackson 17% |

| OTHER COMMUNITY ISSUES | GOOD OR EXCELLENT | FAIR | POOR | Examples of County Variations* % SAID POOR LOW COUNTY | HIGH COUNTY |
|---|---|---|---|---|---|
| Contribution of tourism to local economy..... | 26% | 39% | 35% | Dare 2% | Hoke 73% |
| Effectiveness of land-use planning..... | 24 | 50 | 26 | Nash 4% | Avery 51% |
| Control of crime and juvenile delinquency..... | 28 | 43 | 29 | Ashe 12% | Gaston 60% |
| Opportunity of citizen participation in community decisions..... | 30 | 42 | 28 | Orange 10% | Clay 46 |
| Effectiveness of water pollution controls..... | 28 | 47 | 25 | Nash 4% | Graham 58% |
| Efforts to protect the natural environment..... | 29 | 48 | 23 | Nash 5% | Mitchell 44% |
| Effectiveness of air pollution controls..... | 31 | 45 | 24 | Guilford 12% | Tyrrell 50% |
| Effectiveness of land-use controls (zoning)..... | 31 | 46 | 23 | Cleveland 7% | Graham 59% |
| Contribution of forestry to local economy..... | 30 | 49 | 21 | Haywood 4% | Dare 58% |
| Opportunity for membership in community organizations..... | 44 | 39 | 17 | Lee 6% | Tyrrell 37% |
| Contribution of small business to local economy... | 44 | 40 | 16 | Lee 3% | Tyrrell 41% |
| Community spirit and pride..... | 49 | 37 | 14 | Nash 4% | Tyrrell 33% |
| Contribution of agriculture to local economy..... | 48 | 40 | 12 | Nash 1% | Dare 73% |
| Contribution of industry to local economy..... | 53 | 34 | 13 | Nash 1% | Hyde 74% |





*Individual county data is available in Volumes 1 to 7 of NORTH CAROLINA TODAY AND TOMORROW.

Copies may be obtained from the Agricultural Extension Service, Agricultural Information Department, Ricks Hall, North Carolina State University, Raleigh, North Carolina 27607.

Tables 5, 6, 7, and 8 provide information on the percent of respondents across the State according to level of income, education, age, and rural urban location who said that particular services were poor. In the earlier part of this publication, information was provided on the percent who said the quality or availability of a community service or opportunity was good or excellent. Now the information is provided according to a problem perspective and thus the percent who evaluated items as poor are included in the Table. For example, if 20 percent feel that a particular service is poor then 80 percent feel it is fair, good or excellent. Rather than going through each table item by item according to income, education, age and rural-urban location, the following presents a brief summary of the four tables according to 12 community dimensions. The items are not ordered according to the relative seriousness of the problem area but as they appeared in the questionnaire.

Health: Those of lower income, less educational attainment and particularly those in more rural areas see health as a more serious problem. There seems to be little variation according to age.

Culture: Variations according to income, education, age and rural-urban were small. People of lower income, less education, younger, and more rural seemed a bit more concerned.

Education: Younger people saw the availability and quality of educational programs as a slightly more serious problem than older people. Other differences were minor.

Jobs: The items were clearly of greater concern to lower income, lower education, younger and more rural people.

Housing and Social Services: The items in both of these dimensions were of greater concern to lower income, lower education, and more rural people. Age had little effect.

Law Enforcement: Few differences were apparent between the different levels of income, education, age, and location.

Recreation: These items were of greater concern to lower income, lower education, and more rural people. Age had little effect.

Transportation: Items in this area were perceived as a more serious problem by people in more rural areas. Income, education, and age had little effect.

Economic Development: Items of greater concern to those of lower income and lower educational attainment. Age had little effect. Those in rural areas were more concerned about agriculture and those in more urban areas were more concerned about industry.

Environmental Protection: No consistent trends were apparent according to income, education.

Community Involvement: Those of lower income and those with less educational attainment appeared more removed from community life. Age and rural-urban location did not have much of an influence.

In general, those of lower income and less educational attainment and those in more rural areas perceived most community items as poorer in quality and availability than those of higher income or education. Younger people seemed to rate community services as poorer than older people for some items but on over three-fourths of the items age made little difference. This is a very brief summary of social and demographic variations on the 46 items. Considerable insight can be gained by spending some time and studying the tables item by item.

Table 5 : Percent who perceive the availability and quality of the following community services as poor according to income level.

| Community Dimension Items | Less than $3,000 (225) | 3,000 to $5,999 (292) | 6,000 to $9,999 (553) | 10,000 to $14,999 (713) | 15,000 to $24,999 (669) | $25,000+ (280) | Percentage Point Range |
|---|---|---|---|---|---|---|---|
| HEALTH | | | | | | | |
| Availability of medical facilities | 30% | 29% | 27% | 20% | 16% | 10% | -20 |
| Availability of family doctors | 39 | 45 | 36 | 34 | 30 | 22 | -17 |
| Availability of dentists | 25 | 25 | 25 | 20 | 12 | 11 | -14 |
| Availability of mental-health services | 28 | 32 | 31 | 28 | 22 | 18 | -10 |
| Availability of alcohol and drug rehabilitation services | 37 | 34 | 38 | 30 | 26 | 21 | -16 |
| Overall quality of medical services and facilities | 26 | 25 | 22 | 16 | 12 | 9 | -17 |
| CULTURE | | | | | | | |
| Availability of libraries | 12 | 16 | 14 | 9 | 8 | 6 | - 6 |
| Quality of libraries | 11 | 13 | 11 | 7 | 7 | 9 | * |
| Availability of cultural opportunities (crafts, music, drama) | 33 | 32 | 35 | 26 | 26 | 18 | -15 |
| Quality of cultural opportunities | 30 | 28 | 31 | 24 | 22 | 15 | -15 |
| EDUCATION | | | | | | | |
| Quality of elementary and secondary education | 9 | 11 | 13 | 10 | 13 | 15 | + 6 |
| Availability of public kindergarten programs | 19 | 17 | 25 | 23 | 19 | 22 | * |
| Availability of special education programs | 22 | 22 | 27 | 23 | 20 | 24 | * |
| JOBS | | | | | | | |
| Availability of job training | 36 | 36 | 33 | 24 | 22 | 17 | -19 |
| Quality of job opportunities | 50 | 48 | 47 | 35 | 28 | 21 | -29 |
| HOUSING | | | | | | | |
| Availability of low income housing | 47 | 42 | 40 | 30 | 25 | 20 | -27 |
| Availability of middle income housing | 28 | 24 | 23 | 18 | 13 | 10 | -18 |
| Availability of rental apartments | 36 | 32 | 31 | 24 | 18 | 18 | -18 |
| SOCIAL SERVICES | | | | | | | |
| Quality of child-welfare services | 21 | 14 | 18 | 12 | 8 | 7 | -14 |
| Availability of assistance for aged and disabled | 36 | 34 | 32 | 23 | 22 | 11 | -25 |
| Availability of food stamp program | 22 | 17 | 14 | 10 | 7 | 4 | -18 |
| Availability of child-care centers | 29 | 28 | 27 | 22 | 19 | 19 | -10 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **LAW ENFORCEMENT** | | | | | | | |
| Quality of county and city law enforcement | 16 | 18 | 19 | 14 | 10 | 14 | * |
| Control of crime and juvenile delinquency | 35 | 34 | 33 | 26 | 24 | 24 | -11 |
| Quality of highway patrol | 6 | 5 | 4 | 4 | 4 | 2 | * |
| **RECREATION** | | | | | | | |
| Availability of public parks and playgrounds | 35 | 38 | 40 | 32 | 32 | 21 | -14 |
| Quality of public parks and playgrounds | 30 | 38 | 35 | 28 | 26 | 20 | -10 |
| Availability of state parks | 36 | 40 | 41 | 33 | 37 | 29 | - 7 |
| Quality of state parks | 26 | 25 | 28 | 20 | 19 | 13 | -13 |
| Overall quality of recreational facilities | 34 | 35 | 31 | 25 | 21 | 14 | -20 |
| **TRANSPORTATION** | | | | | | | |
| Condition of streets and roads | 22 | 24 | 18 | 15 | 14 | 11 | -11 |
| Condition of highways | 11 | 13 | 8 | 7 | 8 | 9 | * |
| Availability of public transportation | 47 | 53 | 53 | 57 | 58 | 54 | + 7 |
| **ECONOMIC DEVELOPMENT** | | | | | | | |
| Contribution of small business to local economy | 22 | 24 | 21 | 14 | 11 | 8 | -14 |
| Contribution of industry to local economy | 24 | 21 | 15 | 11 | 8 | 7 | -17 |
| Contribution of agriculture to local economy | 18 | 18 | 12 | 9 | 11 | 10 | - 8 |
| Contribution of forestry to local economy | 28 | 22 | 21 | 20 | 22 | 19 | - 9 |
| Contribution of tourism to local economy | 40 | 36 | 40 | 35 | 35 | 28 | -12 |
| **ENVIRONMENTAL PROTECTION** | | | | | | | |
| Effectiveness of air pollution controls | 32 | 31 | 28 | 23 | 22 | 17 | -15 |
| Effectiveness of water pollution controls | 29 | 29 | 27 | 24 | 23 | 20 | - 9 |
| Effectiveness of land-use planning | 28 | 29 | 26 | 23 | 29 | 24 | * |
| Effectiveness of land-use controls (zoning, building and health codes, etc.) | 24 | 24 | 22 | 21 | 26 | 24 | * |
| Efforts to protect the natural environment | 22 | 29 | 24 | 22 | 25 | 19 | * |
| **COMMUNITY INVOLVEMENT** | | | | | | | |
| Opportunity of citizen participation in community decisions | 28 | 35 | 33 | 28 | 25 | 19 | - 9 |
| Opportunity for membership in community organizations | 22 | 23 | 23 | 18 | 10 | 7 | -15 |
| Community spirit and pride | 20 | 12 | 19 | 16 | 11 | 8 | -12 |

*This indicates that percentage point range between the categories is less than 5 percent or that no apparent trend is observable. A (+) indicates of greater concern to those of higher income and a (-) indicates greater concern to those of lower income.

Table 6: Percent who perceive the availability and quality of the following community services as poor according to educational attainment.

| Community Dimension Items | Grade School (404) | High School (1166) | College (884) | Higher Degree (378) | Percentage Point Range |
|---|---|---|---|---|---|
| **HEALTH** | | | | | |
| Availability of medical facilities | 29 | 23 | 19 | 13 | -16 |
| Availability of family doctors | 44 | 35 | 31 | 26 | -18 |
| Availability of dentists | 32 | 19 | 16 | 12 | -20 |
| Availability of mental-health services | 36 | 29 | 22 | 20 | -16 |
| Availability of alcohol & drug rehabilitation services | 41 | 34 | 26 | 19 | -22 |
| Overall quality of medical services and facilities | 26 | 19 | 15 | 10 | -16 |
| **CULTURE** | | | | | |
| Availability of libraries | 13 | 10 | 10 | 10 | * |
| Quality of libraries | 11 | 8 | 9 | 10 | * |
| Availability of cultural opportunities (crafts, music, drama) | 34 | 28 | 26 | 24 | -10 |
| Quality of cultural opportunities | 29 | 27 | 22 | 20 | - 9 |
| **EDUCATION** | | | | | |
| Quality of elementary and secondary education | 11 | 10 | 14 | 16 | * |
| Availability of public kindergarten programs | 19 | 19 | 23 | 25 | + 6 |
| Availability of special education programs | 22 | 22 | 24 | 22 | * |
| **JOBS** | | | | | |
| Availability of job training | 33 | 29 | 25 | 19 | -14 |
| Quality of job opportunities | 45 | 41 | 32 | 25 | -20 |
| **HOUSING** | | | | | |
| Availability of low income housing | 43 | 35 | 27 | 27 | -16 |
| Availability of middle income housing | 28 | 20 | 16 | 13 | -15 |
| Availability of rental apartments | 33 | 29 | 20 | 19 | -14 |
| **SOCIAL SERVICES** | | | | | |
| Quality of child-welfare services | 18 | 13 | 11 | 10 | - 8 |
| Availability of assistance for aged and disabled | 34 | 30 | 21 | 17 | -17 |
| Availability of food stamp program | 19 | 12 | 8 | 8 | - 8 |
| Availability of child-care centers | 28 | 24 | 20 | 18 | -10 |

| | | | | | |
|---|---|---|---|---|---|
| **LAW ENFORCEMENT** | | | | | |
| Quality of county and city law enforcement | 16 | 17 | 14 | 9 | - 7 |
| Control of crime and juvenile delinquency | 32 | 31 | 26 | 22 | -10 |
| Quality of highway patrol | 5 | 5 | 3 | 4 | * |
| **RECREATION** | | | | | |
| Availability of public parks and playgrounds | 39 | 36 | 30 | 25 | -14 |
| Quality of public parks and playgrounds | 36 | 33 | 25 | 21 | -15 |
| Availability of state parks | 41 | 38 | 33 | 30 | -11 |
| Quality of state parks | 28 | 25 | 18 | 14 | -14 |
| Overall quality of recreational facilities | 32 | 31 | 20 | 15 | -17 |
| **TRANSPORTATION** | | | | | |
| Condition of streets and roads | 22 | 18 | 13 | 13 | - 9 |
| Condition of highways | 12 | 9 | 7 | 8 | * |
| Availability of public transportation | 52 | 54 | 56 | 56 | * |
| **ECONOMIC DEVELOPMENT** | | | | | |
| Contribution of small business to local economy | 22 | 17 | 12 | 11 | -11 |
| Contribution of industry to local economy | 19 | 14 | 10 | 10 | - 9 |
| Contribution of agriculture to local economy | 14 | 11 | 12 | 12 | * |
| Contribution of forestry to local economy | 22 | 19 | 23 | 24 | * |
| Contribution of tourism to local economy | 36 | 37 | 35 | 29 | - 7 |
| **ENVIRONMENTAL PROTECTION** | | | | | |
| Effectiveness of air pollution controls | 31 | 23 | 23 | 23 | - 8 |
| Effectiveness of water pollution controls | 30 | 23 | 25 | 26 | * |
| Effectiveness of land-use planning | 27 | 23 | 27 | 33 | + 6 |
| Effectiveness of land-use controls (zoning, building and health codes, etc.) | 23 | 20 | 24 | 30 | + 7 |
| Efforts to protect the natural environment | 25 | 21 | 25 | 28 | * |
| **COMMUNITY INVOLVEMENT** | | | | | |
| Opportunity of citizen participation in community decisions | 30 | 31 | 26 | 22 | - 8 |
| Opportunity for membership in community organizations | 24 | 19 | 14 | 9 | -15 |
| Community spirit and pride | 19 | 14 | 13 | 13 | - 6 |

*This indicates that percentage point range between the categories is less than 5 percent or that no apparent trend is observable. A (+) indicates of greater concern to those of higher educational attainment and a (-) indicates greater concern to those of lower educational attainment.

Table 7 : Percent who perceive the availability and quality of the following community services as poor according to age.

| Community Dimension Items | Under 30 (551) | 30-39 (608) | 40-59 (1141) | 60+ (585) | Percentage Point Range |
|---|---|---|---|---|---|
| HEALTH | | | | | |
| Availability of medical facilities | 23 | 20 | 21 | 20 | * |
| Availability of family doctors | 31 | 33 | 33 | 35 | * |
| Availability of dentists | 17 | 16 | 20 | 22 | * |
| Availability of mental-health services | 27 | 26 | 26 | 25 | * |
| Availability of alcohol & drug rehabilitation services | 32 | 28 | 30 | 30 | * |
| Overall quality of medical services and facilities | 18 | 18 | 17 | 17 | * |
| CULTURE | | | | | |
| Availability of libraries | 14 | 10 | 8 | 7 | -7 |
| Quality of libraries | 12 | 10 | 8 | 6 | -6 |
| Availability of cultural opportunities (crafts, music, drama) | 32 | 29 | 27 | 20 | -12 |
| Quality of cultural opportunities | 25 | 26 | 24 | 20 | * |
| EDUCATION | | | | | |
| Quality of elementary and secondary education | 14 | 13 | 12 | 7 | -7 |
| Availability of public kindergarten programs | 25 | 25 | 19 | 17 | -8 |
| Availability of special education programs | 28 | 26 | 19 | 17 | -11 |
| JOBS | | | | | |
| Availability of job training | 32 | 26 | 26 | 23 | -9 |
| Quality of job opportunities | 44 | 36 | 35 | 32 | -12 |
| HOUSING | | | | | |
| Availability of low income housing | 32 | 31 | 32 | 37 | * |
| Availability of middle income housing | 18 | 18 | 19 | 20 | * |
| Availability of rental apartments | 21 | 26 | 26 | 26 | * |
| SOCIAL SERVICES | | | | | |
| Quality of child-welfare services | 16 | 11 | 11 | 15 | * |
| Availability of assistance for aged and disabled | 30 | 25 | 25 | 26 | * |
| Availability of food stamp program | 14 | 8 | 10 | 13 | * |
| Availability of child-care centers | 23 | 21 | 23 | 23 | * |

| | | | | | |
|---|---|---|---|---|---|
| **LAW ENFORCEMENT** | | | | | |
| Quality of county and city law enforcement | 20 | 14 | 13 | 12 | - 8 |
| Control of crime and juvenile delinquency | 27 | 27 | 29 | 30 | * |
| Quality of highway patrol | 4 | 3 | 5 | 3 | * |
| **RECREATION** | | | | | |
| Availability of public parks and playgrounds | 36 | [illegible] | 32 | 26 | -10 |
| Quality of public parks and playgrounds | 30 | 29 | 31 | 22 | - 8 |
| Availability of state parks | 36 | 37 | 36 | 34 | * |
| Quality of state parks | 20 | 23 | 22 | 19 | * |
| Overall quality of recreational facilities | 30 | 24 | 26 | 22 | - 8 |
| **TRANSPORTATION** | | | | | |
| Condition of streets and roads | 17 | 16 | 16 | 15 | * |
| Condition of highways | 8 | 8 | 8 | 9 | * |
| Availability of public transportation | 52 | 58 | 55 | 48 | * |
| **ECONOMIC DEVELOPMENT** | | | | | |
| Contribution of small business to local economy | 13 | 15 | 16 | 19 | + 6 |
| Contribution of industry to local economy | 13 | 13 | 13 | 11 | * |
| Contribution of agriculture to local economy | 13 | 11 | 12 | 12 | * |
| Contribution of forestry to local economy | 25 | 18 | 21 | 20 | * |
| Contribution of tourism to local economy | 38 | 39 | 33 | 32 | - 6 |
| **ENVIRONMENTAL PROTECTION** | | | | | |
| Effectiveness of air pollution controls | 22 | 23 | 25 | 25 | * |
| Effectiveness of water pollution controls | 24 | 23 | 27 | 24 | * |
| Effectiveness of land-use planning | 26 | 24 | 28 | 24 | * |
| Effectiveness of land-use controls (zoning, building and health codes, etc.) | 19 | 23 | 25 | 20 | * |
| Efforts to protect the natural environment | 22 | 22 | 25 | 21 | * |
| **COMMUNITY INVOLVEMENT** | | | | | |
| Opportunity of citizen participation in community decisions | 29 | 27 | 29 | 24 | * |
| Opportunity for membership in community organizations | 19 | 14 | 18 | 13 | - 6 |
| Community spirit and pride | 17 | 15 | 14 | 9 | - 8 |

*This indicates that percentage point range between the categories is less than 5 percent or that no apparent trend is observable. A (+) indicates of greater concern to older respondents and a (-) indicates greater concern to younger respondents.

Table 8: Percent who perceive the availability and quality of the following community services as poor according to the size of community.

| Community Dimension Items | Farm (378) | Town less than 10,000 (1,002) | City 10,000- 50,000 (698) | Larger City 50,000+ (676) | Percentage Point Range |
|---|---|---|---|---|---|
| **HEALTH** | | | | | |
| Availability of medical facilities | 31% | 29% | 16% | 8% | -23 |
| Availability of family doctors | 43 | 41 | 29 | 20 | -23 |
| Availability of dentists | 29 | 27 | 14 | 6 | -23 |
| Availability of mental-health services | 32 | 38 | 19 | 14 | -18 |
| Availability of alcohol and drug rehabilitation services | 38 | 43 | 23 | 12 | -26 |
| Overall quality of medical services and facilities | 27 | 24 | 14 | 6 | -21 |
| **CULTURE** | | | | | |
| Availability of libraries | 12 | 13 | 9 | 6 | - 6 |
| Quality of libraries | 10 | 12 | 6 | 6 | * |
| Availability of cultural opportunities (crafts, music, drama) | 30 | 38 | 23 | 13 | -17 |
| Quality of cultural opportunities | 28 | 35 | 22 | 10 | -18 |
| **EDUCATION** | | | | | |
| Quality of elementary and secondary education | 10 | 10 | 11 | 14 | * |
| Availability of public kindergarten programs | 19 | 22 | 20 | 22 | * |
| Availability of special education programs | 24 | 29 | 18 | 17 | - 7 |
| **JOBS** | | | | | |
| Availability of job training | 29 | 36 | 23 | 17 | -22 |
| Quality of job opportunities | 39 | 47 | 32 | 22 | -17 |
| **HOUSING** | | | | | |
| Availability of low income housing | 37 | 45 | 27 | 18 | -19 |
| Availability of middle income housing | 24 | 25 | 17 | 9 | -15 |
| Availability of rental apartments | 33 | 40 | 18 | 7 | -26 |
| **SOCIAL SERVICES** | | | | | |
| Quality of child-welfare services | 13 | 18 | 10 | 7 | - 6 |
| Availability of assistance for aged and disabled | 29 | 32 | 25 | 16 | -13 |
| Availability of food stamp program | 11 | 15 | 9 | 10 | * |
| Availability of child-care centers | 25 | 33 | 19 | 8 | -17 |

| | | | | | |
|---|---|---|---|---|---|
| **LAW ENFORCEMENT** | | | | | |
| Quality of county and city law enforcement | 18 | 18 | 12 | 9 | - 9 |
| Control of crime and juvenile delinquency | 33 | 30 | 27 | 26 | - 7 |
| Quality of highway patrol | 5 | 4 | 4 | 4 | * |
| **RECREATION** | | | | | |
| Availability of public parks and playgrounds | 39 | 45 | 26 | 16 | -23 |
| Quality of public parks and playgrounds | 35 | 41 | 23 | 13 | -22 |
| Availability of state parks | 41 | 42 | 37 | 25 | -16 |
| Quality of state parks | 26 | 29 | 19 | 10 | -16 |
| Overall quality of recreational facilities | 29 | 34 | 22 | 13 | -16 |
| **TRANSPORTATION** | | | | | |
| Condition of streets and roads | 19 | 19 | 14 | 14 | * |
| Condition of highways | 13 | 10 | 6 | 6 | - 7 |
| Availability of public transportation | 55 | 62 | 56 | 40 | -15 |
| **ECONOMIC DEVELOPMENT** | | | | | |
| Contribution of small business to local economy | 18 | 19 | 12 | 12 | - 6 |
| Contribution of industry to local economy | 16 | 17 | 9 | 8 | - 8 |
| Contribution of agriculture to local economy | 9 | 12 | 11 | 15 | + 6 |
| Contribution of forestry to local economy | 13 | 22 | 19 | 28 | +15 |
| Contribution of tourism to local economy | 37 | 44 | 37 | 22 | -15 |
| **ENVIRONMENTAL PROTECTION** | | | | | |
| Effectiveness of air pollution controls | 27 | 30 | 22 | 18 | - 9 |
| Effectiveness of water pollution controls | 31 | 28 | 21 | 21 | -10 |
| Effectiveness of land-use planning | 26 | 29 | 23 | 27 | * |
| Effectiveness of land-use controls (zoning, building and health codes, etc.) | 21 | 25 | 19 | 27 | + 6 |
| Efforts to protect the natural environment | 24 | 27 | 18 | 24 | * |
| **COMMUNITY INVOLVEMENT** | | | | | |
| Opportunity of citizen participation in community decisions | 31 | 29 | 27 | 27 | * |
| Opportunity for membership in community organizations | 20 | 18 | 15 | 16 | * |
| Community spirit and pride | 10 | 15 | 13 | 18 | + 8 |

*This indicates that percentage point range between the categories is less than 5 percent of that no apparent trend is observable. A (+) indicates of greater concern to urban areas and a (-) indicates of greater concern to rural areas.

# SAMPLE AND DATA COLLECTION [5]

During the Spring of 1975, a state-wide survey was conducted in North Carolina. A mail questionnaire was sent to randomly selected individuals throughout the State. In order to have a sample proportional to the State's population and a sample of sufficient size for county comparisons, two sets of data were developed.

First a 1/1000 sample of the total population was drawn from telephone directories for all counties. For example, Dare County had approximately 7,000 people according to the 1970 census while Guilford County had approximately 289,000 people. Thus, 7 respondents were randomly selected from telephone lists for Dare County and 289 from telephone lists for Guilford County. A statement on the questionnaire requested that the survey be completed by the head of the household. In all, 5,082 respondents were selected for the state proportional sample. Some 578 of these respondents were inaccessible because they had moved out of State, had moved with no forwarding address, were deceased, blind, disabled, or unable to be contacted either by mail or by follow-up telephone calls. These 578 inaccessible respondents were eliminated from the sample. Of the remaining 4,502 potential respondents for the state-wide proportional sample, 3,054 returned usable questionnaires for a response rate of 68 percent. This data set was used whenever reference was made to the State.

Second, in order to make the information more meaningful at the county level, an oversampling procedure was employed. All counties in the State, regardless of population size, had a minimum of 150 respondents drawn from telephone lists for each county. For example, Dare County had 7 respondents sampled for the state-wide proportional sample plus 143 respondents added in the oversample to achieve the minimum county sample size of 150. There was no oversample in Guilford County since the proportional sample exceeded 150. Thus, the combined state proportional sample and the county oversample yielded a total sample of 15,548. Because many of these respondents were inaccessible for the aforementioned reasons, the total number of potential respondents for the total sample was 13,551. Of these 13,551 potential respondents, 8,882 respondents returned usable questionnaires for a response rate of 66 percent. This data set was used for county comparisons.

The next page describes the number of potential respondents (150 minus number inaccessible) for each county, the number of usable questionnaires returned, county response rates, and number which were included in the state proportional sample. It should be noted that the state proportional sample was given special emphasis in follow-ups. Because of this emphasis, the state proportional sample had a slightly higher response rate.

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[5] More detailed presentations are available in the following articles: James A. Christenson, "A procedure for conducting mail surveys with the general public." Journal of the Community Development Society 6(#1)135-146, 1975; Don A Dillman, James A. Christenson, Edwin Carpenter and Ralph Brooks, "Increasing mail questionnaire response: a four state comparison." American Sociological Review 39 (October): 744-756, 1974.

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Table 13: Response rate for counties in North Carolina and number of responses used in statewide proportional sample.

| COUNTY | COUNTY SAMPLE Potential Respondents* | Number Returned | % | Number in State Sample** | COUNTY | COUNTY SAMPLE Potential Respondents* | Number Returned | % | Number in State Sample** | COUNTY | COUNTY SAMPLE Potential Respondents* | Number Returned | % | Number in State Sample** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ALAMANCE | 120 | 69 | 58 | 52 | FRANKLIN | 128 | 75 | 59 | 17 | ORANGE | 125 | 87 | 70 | 33 |
| ALEXANDER | 121 | 66 | 55 | 14 | GASTON | 130 | 87 | 67 | 85 | PAMLICO | 136 | 95 | 70 | 8 |
| ALLEGHANY | 140 | 97 | 69 | 2 | GATES | 144 | 104 | 72 | 8 | PASQUOTANK | 135 | 124 | 92 | 17 |
| ANSON | 136 | 82 | 60 | 14 | GRAHAM | 126 | 87 | 69 | 3 | PENDER | 118 | 67 | 57 | 11 |
| ASHE | 137 | 115 | 84 | 16 | GRANVILLE | 136 | 85 | 62 | 23 | PERQUIMANS | 136 | 79 | 58 | 4 |
| AVERY | 111 | 73 | 66 | 5 | GREENE | 138 | 103 | 75 | 12 | PERSON | 139 | 92 | 66 | 19 |
| BEAUFORT | 122 | 73 | 60 | 17 | GUILFORD | 243 | 148 | 61 | 148 | PITT | 133 | 76 | 57 | 37 |
| BERTIE | 141 | 98 | 70 | 16 | HALIFAX | 128 | 72 | 56 | 31 | POLK | 128 | 72 | 56 | 4 |
| BLADEN | 134 | 78 | 58 | 16 | HARNETT | 129 | 89 | 69 | 37 | RANDOLPH | 137 | 96 | 70 | 49 |
| BRUNSWICK | 129 | 89 | 69 | 16 | HAYWOOD | 129 | 80 | 62 | 29 | RICHMOND | 128 | 81 | 63 | 26 |
| BUNCOMBE | 128 | 83 | 65 | 78 | HENDERSON | 127 | 75 | 59 | 30 | ROBESON | 126 | 69 | 55 | 44 |
| BURKE | 126 | 78 | 62 | 41 | HERTFORD | 138 | 95 | 69 | 16 | ROCKINGHAM | 133 | 84 | 63 | 46 |
| CABARRUS | 130 | 84 | 65 | 38 | HOKE | 120 | 66 | 55 | 12 | ROWAN | 131 | 105 | 80 | 64 |
| CALDWELL | 133 | 78 | 59 | 32 | HYDE | 134 | 84 | 63 | 6 | RUTHERFORD | 124 | 76 | 61 | 28 |
| CAMDEN | 135 | 76 | 56 | 4 | IREDELL | 137 | 91 | 66 | 40 | SAMPSON | 140 | 83 | 59 | 25 |
| CARTERET | 123 | 88 | 72 | 25 | JACKSON | 128 | 103 | 80 | 17 | SCOTLAND | 137 | 85 | 62 | 17 |
| CASWELL | 137 | 100 | 73 | 14 | JOHNSTON | 134 | 74 | 55 | 29 | STANLY | 124 | 78 | 63 | 26 |
| CATAWBA | 123 | 92 | 75 | 57 | JONES | 141 | 79 | 56 | 5 | STOKES | 136 | 100 | 74 | 20 |
| CHATHAM | 127 | 91 | 72 | 21 | LEE | 131 | 74 | 56 | 19 | SURRY | 130 | 86 | 66 | 29 |
| CHEROKEE | 132 | 87 | 66 | 8 | LENOIR | 130 | 81 | 62 | 30 | SWAIN | 120 | 70 | 58 | 5 |
| CHOWAN | 130 | 69 | 53 | 7 | LINCOLN | 138 | 94 | 68 | 16 | TRANSYLVANIA | 131 | 105 | 80 | 17 |
| CLAY | 134 | 95 | 71 | 4 | MCDOWELL | 131 | 90 | 69 | 26 | TYRRELL | 141 | 90 | 64 | 4 |
| CLEVELAND | 142 | 87 | 61 | 36 | MACON | 116 | 80 | 69 | 11 | UNION | 135 | 89 | 66 | 38 |
| COLUMBUS | 139 | 94 | 68 | 34 | MADISON | 134 | 96 | 72 | 10 | VANCE | 131 | 82 | 63 | 22 |
| CRAVEN | 123 | 90 | 73 | 36 | MARTIN | 138 | 91 | 66 | 18 | WAKE | 194 | 150 | 77 | 150 |
| CUMBERLAND | 180 | 125 | 69 | 125 | MECKLENBURG | 293 | 200 | 68 | 200 | WARREN | 132 | 83 | 63 | 9 |
| CURRITUCK | 129 | 80 | 62 | 5 | MITCHELL | 138 | 83 | 60 | 7 | WASHINGTON | 135 | 79 | 59 | 9 |
| DARE | 114 | 70 | 61 | 4 | MONTGOMERY | 133 | 74 | 56 | 11 | WATAUGA | 118 | 78 | 66 | 16 |
| DAVIDSON | 127 | 77 | 61 | 60 | MOORE | 124 | 73 | 59 | 13 | WAYNE | 126 | 68 | 54 | 45 |
| DAVIE | 141 | 108 | 77 | 13 | NASH | 131 | 73 | 56 | 29 | WILKES | 134 | 98 | 73 | 38 |
| DUPLIN | 142 | 99 | 70 | 26 | NEW HANOVER | 129 | 99 | 77 | 52 | WILSON | 136 | 79 | 58 | 30 |
| DURHAM | 137 | 83 | 61 | 75 | NORTHAMPTON | 136 | 94 | 69 | 16 | YADKIN | 137 | 89 | 65 | 16 |
| EDGECOMBE | 125 | 109 | 87 | 46 | ONSLOW | 126 | 99 | 79 | 57 | YANCEY | 136 | 85 | 62 | 7 |
| FORSYTH | 183 | 121 | 66 | 121 | | | | | | | | | | |

TOTAL 13,551

8,882

66%

3,054

*All counties, except the five metropolitan counties, had 150 names drawn for the sample. However, because some of the respondents were deceased, had moved, or were not able to be contacted, they were eliminated from the sample. Potential respondents equal 150 minus deceased, moved, etc.

**Number returned from a 1/1000 population sample.